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Corte

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(54) **METHOD AND APPARATUS FOR A CHOKE VALVE AND OPERATION OF A CHOKE VALVE**

(58) **Field of Classification Search**
CPC . F16K 27/02; F16K 27/0254; Y10T 137/5983
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See application file for complete search history.

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This patent is subject to a terminal disclaimer.

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F16K 27/02 (2006.01)
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(56) **References Cited**

U.S. PATENT DOCUMENTS

4,240,609	A	12/1980	Hahn et al.
4,272,055	A	6/1981	Herd
4,311,297	A	1/1982	Barrington
5,386,965	A	2/1995	Marchal
7,331,562	B2	2/2008	Springett

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(57) **ABSTRACT**

A choke valve comprising: a body having an axial through hole and a radial entry port; a valve seat coaxially housed in the body axial through hole on a first side of the radial entry port; a pressure balanced valving member axially reciprocable within the body axial through hole between a first sealing position bearing against the valve seat and a second position spaced away from the seat; an actuator housing operably connected to the valving member; and a detachably connected reinforcement member detachably connected to the actuator housing and increasing the axial load that the actuator housing can take before failure of the actuator housing.

8 Claims, 17 Drawing Sheets

